

CLAIMS

What is claimed is:

1. A video conference system, comprising:
 - a first conference room and a second conference room, the conference rooms electronically coupled together to permit transmission of images from each room to the other room for viewing, each conference room having:
 - a large format display system for projecting images; and
 - a first camera positioned with respect to the large format display system to capture an image of the conference room and a participant in the room, without substantially obscuring the participant's view of the large format display system, so as to provide the perception that the participant in the room is looking directly at a participant in the other conference room.
2. The video conference system of claim 1, wherein the camera is substantially hidden from the view of the participant in the conference room.
3. The video conference system of claim 1, wherein the camera is located substantially medial to the large format display system and at or about eye level of a participant in the conference room, the camera substantially hidden from the view of the participant in the conference room.
4. The video conference system of claim 1 wherein the large format display system has an aperture, the camera located behind the aperture.
5. The video conference system of claim 4 wherein the aperture is located at a height at or about eye level of the participants and at a horizontal position at or near horizontal middle of the large format display system.

6. The video conference system of claim 4 wherein the aperture is located so as to coincide with a visually insignificant area of the image of the other conference room as displayed on the large format display system.

7. The video conference system of claim 6 wherein the visually insignificant area corresponds to an image of an unobtrusive object located in the other conference room.

8. The video conference system of claim 1 wherein each conference room is electronically coupled to transmit sound to and to receive sound from the other conference room.

9. The video conference system of claim 1 wherein each conference room further comprises:

an audio capture system for capturing audio from the conference room, the audio capture system having a microphone; and
an audio amplification system for projecting audio in the conference room, the audio amplification system having a speaker.

10. The video conference system of claim 9 wherein:

the audio capture system comprises a plurality of microphones distributed throughout the conference room;

the audio amplification system comprises a plurality of speakers distributed around the conference room so the audio seems to emit from an image of a participant on the large format display system, and wherein the audio capture system and the audio amplification system are capable of permitting simultaneous dialog between participants in the first conference room and the second conference room.

11. The video conference system of claim 10 wherein at least one speaker of the audio amplification system is located behind the large format display system at a height at or near the height of an image of a participant on the large format display system.

12. The video conference system of claim 10 wherein at least one microphone is located in or on a surface of a table located in the conference room.

13. The video conference system of claim 1 wherein the large format display system comprises a projection display device and a projection screen, the screen having a front and a back, the front of the screen facing the conference room, the projection display device located behind the screen, facing the back of the screen, the screen having the aperture for receiving the lens of the camera.

14. The video conference system of claim 13 wherein the projection screen is substantially the front wall of the room.

15. The video conference system of claim 1 wherein the large format display system displays an approximately life-size image of the other conference room.

16. The video conference system of claim 1 wherein the camera is a high definition camera.

17. The video conference system of claim 1 wherein the first and second conference rooms contain similar furnishings, the furnishings arranged and located within the room in a manner to provide the perception of participants sharing a same physical space.

18. The video conference system of claim 1 wherein the first and second conference rooms contain similar wall color and surfaces to provide the perception of participants sharing a same physical space.

19. The video conference system of claim 1 wherein the first and second conference rooms are lighted to provide the perception of participants sharing a same physical space and to optimize the clarity of an image captured.

20. The video conference system of claim 19, further comprising:

- a plurality of overhead indirect lighting fixtures;
- a plurality of side indirect lighting fixtures;
- a conference room table; and
- an light source attached underneath the conference table.

21. The video conference system of claim 1, wherein a conference room further comprises a second camera for capturing with high fidelity resolution an image of an item located at a pre-determined location within the conference room.

22. The video conference system of claim 21 wherein the second camera is a high definition camera.

23. The video conference system of claim 22 wherein the second camera is located where it can focus on the pre-determined location within the conference room, the pre-determined location being the place where the item requiring high fidelity resolution image capture may be placed.

24. The video conference system of claim 1 further comprising:

- a half mirror beam splitter oriented at an angle with respect to the large format display system and positioned near the horizontal middle of the large format display system and at or about eye level of the participant in the conference room for capturing the image of the conference room and the participant and to project the image into the lens of the camera.

25. The video conference system of claim 1, further comprising:

- a half mirror beam splitter oriented at an angle with respect to the large format display system and positioned such that a line of site of a participant in one room to an image on the large format display system of a participant in another room passes through the half mirror beam splitter to provide the

perception of the participant looking directly at the participant in the other conference room.

26. The video conference system of claim 1 further comprising:

an aperture located horizontally medial in the large format display system, the aperture having an anti-reflective, transparent cover, wherein the camera is positioned behind the aperture

27. The video conference system of claim 24 wherein the half mirror beam splitter is at least partially transparent, providing the participants in the conference room a substantially unobstructed view of the display system.

28. The video conference system of claim 24 wherein the half mirror beam splitter is located at a height at or near the eye level of the participant in the conference room.

29. A method of video conferencing between a first conference room and a second conference room, comprising:

receiving in the first conference room an image of the second conference room;
projecting the image onto a first large format display system in the first conference room at or near life size;

capturing an image of the first conference room and a participant in the first conference room, without substantially obscuring the participant's view of the first large format display system, so as to provide the perception that the participant in the first conference room is looking directly at a participant in the second conference room; and

transmitting the captured image to the second conference room for viewing.

30. A method of video conferencing between a first conference room and a second conference room, comprising:

receiving in the first conference room an image of the second conference room;
projecting the image onto a first large format display system in the first conference room at or near life size;

capturing an image of the first conference room and a participant in the first conference room, the participant having a line of sight to a medial portion of the first large format display system, the line of sight being within a field of view of an camera in the first conference room and the camera substantially hidden from view of the participant; and
transmitting the captured image to the second conference room for viewing.

31. A method of video conferencing between a first conference room and a second conference room, comprising:

receiving in the first conference room an image of the second conference room;
projecting the image onto a first large format display system in the first conference room at or near life size;
capturing an image of the first conference room and a participant in the first conference room using an camera located at a position within the first conference room that is substantially medial to the first large format display system and at or about eye level of a participant, the camera substantially hidden from the view of the participant in the conference room; and
transmitting the captured image to the second conference room for viewing.

32. The method of video conferencing of claim 29 further comprising projecting the captured image onto a second large format display system in the second conference room at or near life size.

33. The method of video conferencing of claim 29 further comprising:
receiving in the first conference room sound from the second conference room;
projecting the received sound into the first conference room;
capturing sound in the first conference room; and
transmitting the captured sound to the second conference room for projection in the second conference room.

34. The method of video conferencing of claim 29 further comprising:
capturing a high fidelity resolution image of an item at a pre-determined location within the second conference room;
transmitting the captured high fidelity resolution image to the first conference room;
receiving in the first conference room the captured high fidelity resolution image; and
projecting in the first conference room the captured high fidelity resolution image for viewing.

35. A video conferencing system for coupling a first conference room and a second conference room, comprising:

means for receiving in the first conference room an image of the second conference room;
means for projecting the image onto a first large format display system in the first conference room at or near life size;
means for capturing an image of the first conference room and a participant in the first conference room, without substantially obscuring the participant's view of the first large format display system, so as to provide the perceptoin that the participant in the first conference room is looking directly at a participant in the second conference room; and
means for transmitting the captured image to the second conference room for viewing.

36. The video conferencing system of claim 35 further comprising a means for projecting the captured image onto a second large format display system in the second conference room at or near life size.

37. A video conferencing system for coupling a first conference room and a second conference room, comprising:

means for receiving in the first conference room an image of the second conference room;

means for projecting the image onto a first large format display system in the first conference room at or near life size;

means for capturing an image of the first conference room and a participant in the first conference room, the participant having a line of sight to a medial portion of the first large format display system, the line of sight being within a field of view of an camera in the first conference room and the camera substantially hidden from view of the participant; and

means for transmitting the captured image to the second conference room for viewing.

38. A video conferencing system for coupling a first conference room and a second conference room, comprising:

means for receiving in the first conference room an image of the second conference room;

means for projecting the image onto a first large format display system in the first conference room at or near life size;

means for capturing an image of the first conference room and a participant in the first conference room using an camera located at a position within the first conference room that is substantially medial to the first large format display system and at or about eye level of the participant, the camera substantially hidden from the view of the participant in the conference room; and

means for transmitting the captured image to the second conference room for viewing.

39. A method of manufacturing a video conference system between two rooms, the method comprising:

placing a large format display system in each room;

placing a first camera in each room in a position within the room that is substantially medial to the large format display system and at or about eye level of a participant in the room, the camera substantially hidden from the view of the participant in the room; and

electronically coupling the two rooms together to bidirectionally communicate audio and video information.

40. The method of claim 39, further comprising:

furnishing the rooms with substantially similar furnishings, the furnishings arranged in a substantially similar manner, including similar furniture, lights, wall color and wall surfaces.

41. A method of manufacturing a video conference system between two rooms, the method comprising:

placing a large format display system in each room, the large format display system having a projection screen disposed along or into a wall of the room;

placing a first camera in a position within each room so that a participant in the room has a line of sight to a medial portion of the large format display system, the line of sight being within the field of view of the first camera in the room, the camera substantially hidden from the view of the participant in the room; and

electronically coupling the two rooms together to bidirectionally communicate audio and video information.

42. The method of claim 41, further comprising:

furnishing the rooms with substantially similar furnishings, the furnishings arranged in a substantially similar manner, including similar furniture, lights, wall color and wall surfaces.